

IN THE DRAWINGS:

Please amend the drawings by substituting the enclosed three (3) sheets of drawings containing Figures 1, 2A, 2B and 3 for the three (3) sheets of drawings containing Figures 1, 2A, 2B and 3 previously submitted on July 18, 2003.

Figures 1, 2A, 2B and 3 are hereby amended to add descriptive labels in conformance with 37 CFR 1.84(n) and 1.84(o).

REMARKS

Claims 1-27 were pending and presented for examination in this application. In the Office Action dated June 26, 2007, claims 1-27 were rejected, and claims 1-7, 13-17 and 25-27 were objected to.

Claims 1, 3-5, 7, 8, 11-14, 17-20, and 22-26 are hereby amended merely to more specifically recite inherent aspects of the invention as originally claimed. Claims 6 and 27 are hereby canceled without prejudice or disclaimer. These changes are believed not to introduce new matter, and their entry is respectfully requested. In making these amendments, Applicants do not concede that the subject matter of such claims was in fact disclosed or taught by the cited prior art. Rather, Applicants reserve the right to pursue such protection at a later point in time and merely seeks to pursue protection for the subject matter presented in this submission.

In view of the Amendments herein and the Remarks that follow, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections, and withdraw them.

Objection to the Drawings

In the second paragraph of the Office Action, Figures 1, 2A, 2B, and 3 were objected to for failing to have descriptive labels for the blocks illustrated in the Figures in conformance with 37 CFR 1.84(n) and 1.84(o). Specifically, it is stated in the Office Action that elements 110, 115, 130, 141, 142, 143, 144 and 150 of Figure 1; elements 130, 230, and

260 of Figures 2A and 2B; and elements 400a, 400b, 430 and 460 of Figure 3 do not have descriptive labels, and therefore, do not comply with 37 CFR 1.84(n) and 1.84(o).

Three (3) sheets of substitute drawings for Figures 1, 2A, 2B, and 3 including descriptive labels for the illustrated elements are hereby submitted with the Amendment and Response. Therefore, this objection is overcome.

Entry of the substitute drawing sheet is respectfully requested. Applicants also request that the Examiner explicitly indicate his approval of the substitute drawing sheet in the next official communication.

Objection to the Specification

In the third paragraph of the Office Action, the disclosure was objected to for including informalities in paragraph [0014], line 6 where “signal 120” should be “signal 125”, and in paragraph [0029], line 15 where “530” should be “520.”

Paragraph [0014] of the specification is hereby amended to correct “signal 120” to “signal 125.” Also, paragraph [0029] of the specification is hereby amended to correct “interface system 530” to “the interface system 520.” All of the informalities in the specification indicated in the Office Action are hereby corrected. Therefore, this objection is overcome.

Objection to the Claims

In the fourth paragraph of the Office Action, claims 1-7, 13-17, and 25-27 were objected to for various informalities. Specifically, it is stated in the Office Action that in

claim 1, line 4, “data signals” should be “a first data signal”; in claim 1, line 6, “data signals” should be “a second data signal”; in claim 13, lines 14-15, “the differential digital data signal” should be “a first differential digital data signal”; in claim 13, line 21, “the digital data signal” should be “a second differential data signal”; in claim 25, line 2, “for the transmission” should be “for transmission”; and in claim 25, line 9, “data signals” should be “data signal.”

Claim 1 is hereby amended to recite “first data signals” and “second data signals” instead of “data signals.” Claim 13 is hereby amended to recite “first differential digital signals” and “the second differential digital signals” instead of “the differential digital data signal” and “the digital data signal.” Claim 25 is hereby amended to delete “for the transmission” and to recite “the second converted data signals” instead of “data signals.” Therefore, this objection is moot and overcome in view of the amendment.

Rejection Under 35 USC §112, Paragraph 1

In the sixth paragraph of the Office Action, claims 1-27 were rejected under 35 USC §112, ¶ 1 as allegedly failing to comply with the enablement requirement. This rejection is respectfully traversed with respect to these claims as amended herein. The specific grounds of this rejection are individually addressed herein.

The Office Action states that the specification fails to describe which element(s) in Figures 1-4 is the low impedance node or network as recited in claims 1, 4, 5, 18, 20, and

24.¹ Claims 1, 4-5, 18, 20, and 24 are hereby amended to no longer recite low impedance node or network. Therefore, this ground of rejection is now moot and overcome.

The Office Action also states that the specification fails to describe which element(s) in Figures 1-4 is the low impedance transmission line as recited in claims 8, 11, 12, and 14. Claims 8, 11-12, and 14 are hereby amended to recite the “fixed impedance transmission line” instead of the “low impedance transmission line.” In this respect, the specification describes, for example, in paragraph [0015] that “the node 130 may be a *fixed impedance transmission line* . . . carrying both data signals 120 and 125 supplied at different times to interface system 140.” (Emphasis added). The node 130 in Figure 1, for example, corresponds to the “fixed impedance node” as recited in claims 8, 11-12, and 14. Therefore, the specification clearly describes which element in Figures is the “fixed impedance transmission line” as recited in claims 8, 11, 12, and 14, as amended. Therefore, the Examiner is requested to withdraw this ground of rejection.

It is stated in the Office Action that the specification fails to describe which element(s) in Figures 1-4 are the “first node” and the “second node” as recited in claims 13 and 14. In this regard, the specification describes, for example, in paragraph [0026] of the specification that “*node 400a* is a fixed impedance transmission line carrying one side of the two differential signals . . . and *node 400b* is a second fixed impedance transmission line carrying the other side of the two differential signals. . . .” The nodes 400a and 400b in

¹ The Office Action states that claim 21 recites the low impedance node or network. This appears to be a typographical error of claim 20. Claim 21 does not recite the low impedance node or network. But, the “low impedance node” appears in original claim 20.

Figure 3, for example, correspond to the “first node” and the “second node” as recited in claims 13 and 14. Therefore, the specification clearly describes which elements in Figures are the “first node” and the “second node” as recited in claims 13 and 14, as amended. Therefore, the Examiner is requested to withdraw this ground of rejection.

It is also stated in the Office Action that the specification fails to describe which element(s) in Figures 1-4 are the “fixed impedance node” as recited in claims 25 and 26. In this respect, the specification describes, for example, in paragraph [0015] that “the node 130 may be a fixed impedance transmission line . . . carrying both data signals 120 and 125 supplied at different times to interface system 140.” The node 130 in Figure 1, for example, corresponds to the “fixed impedance node” as recited in claims 25 and 26. Therefore, the specification clearly describes which element in Figures is the “fixed impedance node” as recited in claims 25 and 26, as amended. The Examiner is respectfully requested to withdraw this ground of rejection.

The Office Action states that the specification fails to describe that the low impedance transmission line is one of the group consisting of a 50-ohm coaxial cable, a 75-ohm coaxial cable, a stripline, a microstripline, and a PCB controlled impedance trace, as recited in claim 11. In this regard, claim 11 is hereby amended to recite “fixed impedance transmission line” instead of the “low impedance transmission line.” Also, the specification specifically describes, for example, in paragraph [0015] that “the node 130 may be a fixed impedance transmission line (*e.g., 50-ohm or 75-ohm coaxial cable, twisted pair cable, stripline, microstripline, a printed circuit board (PCB) controlled impedance trace, or the*

like) carrying both data signals 120 and 125 supplied at different times to interface system 140.” (Emphasis added). Therefore, the specification clearly describes that the fixed impedance transmission line is one of the group consisting of a 50-ohm coaxial cable, a 75-ohm coaxial cable, a stripline, a microstripline, and a PCB controlled impedance trace as recited in claim 11, as amended. The Examiner is respectfully requested to withdraw this ground of rejection.

The Office Action states that the specification fails to describe that the lower resistance value is one of about 50 ohms, about 75 ohms, about 100 ohms or about 500 ohms, as recited in claim 17. In this regard, claim 17 is hereby amended to delete any reference to “about 75 ohms, about 100 ohms or about 500 ohms.” Specifically, claim 17 is hereby amended to recite that “the first matching resistors have resistance of about 50 ohms.” The specification, for example, in paragraph [0023] describes that “resistive element 245 is about 50 ohms.” Therefore, the specification clearly describes the feature of claim 17, as amended. The Examiner is respectfully requested to withdraw this ground of rejection.

The Office Action states that the specification fails to describe which element(s) of the drawings shown in Figures 1-4 is the means for isolating a DC voltage from the low impedance node to the wide-band receiver, as recited in claim 20. In this regard, the specification, for example, in paragraph [0019] states that “AC ground 260 thus provides the necessary DC offset to the input of receiver amplifier 230 following the *capacitive decoupling of the DC component* of the applied signals.” (Emphasis added). The capacitive decoupling is performed, for example, by the capacitive element 250 in Figures 2A and 2B.

That is, the capacitive element 250, for example, corresponds to the means for isolating the DC voltage as recited in claim 20. Therefore, the specification clearly describes which element in the Figures corresponds to the means for isolating the DC voltage as recited in claim 20, as amended. The Examiner is respectfully requested to withdraw this ground of rejection.

The Office Action states that the specification fails to describe that the high data rate is between 500 Megabits per second and 3 Gigabits per second and the low data rate is orders of magnitude smaller than the high data rate as recited in claim 22. Claim 22 is hereby amended to recite “first data rate” and “second data rate” instead of the “high data rate” and “low data rate,” respectively. In this regard, the specification, for example, in paragraph [0028] states that “Figure 4 is particularly optimized for operation with data signals at about 9.6 Kbps and 2.5 Gbps data rates” The data rates of 2.5 Gbps and 9.6 Kbps, for example, correspond to the first data rate and the second data rate, respectively. Specifically, the data rate of 2.5 Gbps is between 500 Megabits per second and 3 Gigabits per second. Also, the first data rate (2.5 Gbps) is over 10^5 times larger than the second data rate (9.6 Kbps). That is, the second data rate (9.6 Kbps) is orders of magnitude smaller than the first data rate (2.5 Gbps). The specification, therefore, clearly describes that “the first data rate is between 500 Megabits per second and 3 Gigabits per second and the second data rate is orders of magnitude smaller than the high data rate” as recited in claim 22. The Examiner is respectfully requested to withdraw this ground of rejection.

The Office Action further states that the specification fails to describe which element(s) of the drawings shown in Figures 1-4 is the means for matching a low output impedance of the low impedance node as recited in claim 24.² Claim 24 is hereby amended to recite “means for converting the first digital data signals comprises *means for matching an output impedance of the fixed impedance node.*” In this regard, the specification, for example, in paragraph [0022] states that “the AC load is the low impedance termination of the *resistive element 245 (that matches the fixed impedance of the node 130)* for high data rate signals, and the AC load is the high impedance provided by resistive element 255 and capacitive element 250 for low data rate signals.” That is, the resistive element 245 in Figure 2A, for example, functions to match the impedance of the node 130 that has fixed impedance. Therefore, the specification clearly states that the resistive element 245, for example, corresponds to the “means for matching an output impedance of the fixed impedance node.” Therefore, the Examiner is respectfully requested to withdraw this ground of rejection.

Further, the Office Action states that the specification fails to describe which element(s) of the drawings shown in Figures 1-4 is used for decoupling the low impedance node from the wide-band receiver with respect to a DC voltage as recited in claim 25. Claim 25 is hereby amended to delete the feature of “decoupling the low impedance node from the

² The Office Action specifically states that “the specification fails to describe which element(s) of the drawings shown in Figures 1-4 is the means for providing a fast time response further comprises means for matching a low output impedance of the low impedance node as recited in claim 24.” It is unclear from this Office Action whether “means for providing a fast time response” is not described in the specification or that “means for matching a low output impedance” is not described in the specification. Because the “means for providing a fast time response” is also recited in claim 18 and the same rejection was not raised for claim 18, Applicants interpret this rejection as being directed to “means for matching a low output impedance.”

wide-band receiver to a DC voltage.” Therefore, this ground of rejection is now moot in view of the amended claim 25.

The Office Action also states that the specification fails to describe which element(s) of the drawings shown in Figure 1-4 is used for matching an output impedance of the fixed impedance node with the AC coupling network for a maximum power transfer of the digital data signal as recited in claim 26. As set forth above with respect to claim 24, however, the specification, for example, in paragraph [0022] states that “the AC load is the low impedance termination of the *resistive element 245 (that matches the fixed impedance of the node 130)* for high data rate signals, and the AC load is the high impedance provided by resistive element 255 and capacitive element 250 for low data rate signals.” The resistive element 245 in Figure 2A, for example, functions to match the impedance of the node 130 that has fixed impedance. Therefore, the specification clearly states that the resistive element 245 in Figure 2A, for example, is used for matching the output impedance of the fixed impedance node with the AC coupling network. The Examiner is respectfully requested to withdraw this ground of rejection.

The Office Action also states that the specification fails to describe that the output impedance is in the range of about 50 to about 500 ohms as recited in claim 27. Claim 27 is hereby canceled; and therefore, this ground of rejection is now moot.

As set forth above, the specification in conjunction with the Figures clearly describes the subject matter of claims 1-5, and 7-26, as amended. Therefore, the Examiner is respectfully requested to withdraw this rejection.

Rejection Under 35 USC §112, Paragraph 2

In the eighth paragraph of the Office Action, claims 1-12 and 18-24 were rejected under 35 USC §112, ¶ 2 as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. This rejection is respectfully traversed with respect to these claims as amended herein. The grounds of this rejection are individually addressed herein.

The Office Action states that in claim 1 (lines 3 and 5), claim 4 (line 2), claim 5 (line 2), and claim 24 (line 1), the terms “the low impedance node”, “the impedance network”, “the low impedance node”, and “the means” all lack antecedent basis. In this regard, claims 1, 4, and 5 are hereby amended to no longer recite “the low impedance node”, “the impedance network” and “the low impedance node.” With respect to claim 24, claim 24 depends from claim 18 which recites “*means for converting first digital data signals to first converted digital data signals . . .*” Therefore, there is an antecedent basis for “the means for converting the first digital data signals” as recited in claim 24, as amended. Therefore, the Examiner is respectfully requested to withdraw this ground of rejection.

The Office Action also states that in claim 1, the preamble recites an interface system coupling a fixed impedance node to a wide-band receiver for transmission of data signals of different data rates but the fixed impedance node does not recite in the body of the claim how to achieve the goal of data transmission from the fixed impedance node to the wide-band receiver. The preamble of claim 1 is hereby amended to recite “An interface system between a fixed impedance node and a wide-band receiver for converting data signals of different data rates to converted data signals adapted for the wide-band receiver” Claim 1, as amended no longer recites transmission of data signals. Therefore, this ground of rejection is now moot and overcome.

It is stated in the Office Action that in claim 8, the preamble recites an AC coupling interface system coupling a low impedance transmission line to an amplifier for the non-simultaneous transmission of data signals of different data rates but the amplifier does not recite in the body of the claim how to achieve the goal of the data transmission from the low impedance transmission line to the amplifier. The preamble of claim 9 is hereby amended to recite “An AC coupling interface system between a fixed impedance transmission line and an amplifier for converting non-simultaneous digital data signals of different data rates to converted data signals adapted for the amplifier” Claim 9, as amended no longer recites transmission of data in the preamble. Therefore, this ground of rejection is now moot and overcome.

It is stated in the Office Action that in claim 18, the preamble recites an interface system coupling a low impedance node to a wide-band receiver for transmission of data

signals of different data rates but the body of the claim does not describe how to achieve the goal of data transmission from the low impedance node to the wide-band receiver. In this regard, the preamble of claim 18 is hereby amended to recite “An interface system between a fixed impedance node and a wide-band receiver for converting data signals of different data rates to converted data signals adapted for the wide-band receiver. . . .” Claim 18, as amended no longer recites transmission of data signals. Therefore, this ground of rejection is now moot and overcome.

It is stated in the Office Action that in claim 22, the term “the low data rate is orders of magnitude smaller than the high data rate” is unclear. An “order of magnitude” refers to the number of power of ten (10) contained in the number. For example, for 2.5 Gbps can be expressed as 2.5×10^9 bps (the number of power of ten is 9) and 9.6 Kbps can be expressed as 9.6×10^3 bps (the number of power of ten is 3). The order of magnitude for 2.5 Gbps is nine (9) and the order of magnitude of 9.6 Kbps is three (3). Because three (3) is smaller than nine (9), 9.6 Kbps is six ($6 = 9 - 3$) orders of magnitude smaller than 2.5 Gbps. Such terminology is well understood in the art. Therefore, the Examiner is requested to withdraw this ground of rejection.

As set forth above, the claims 1-5, 7-12 and 18-24, as amended, particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Therefore, the Examiner is respectfully requested to withdraw this rejection.

Rejection Under 35 USC §102(b)

In the tenth paragraph of the Office Action, claims 1-3, 6-7 and 18-21 were rejected under 35 USC §102(b) as allegedly being anticipated by U.S. Patent No. 4,280,221 to Chun et al. ("Chun"). This rejection is respectfully traversed with respect to these claims as amended herein.

Independent claim 1, as amended, specifically recites:

“An interface system *between a fixed impedance node and a wide-band receiver* for converting data signals of different data rates to converted data signals adapted for the wide-band receiver, the interface system comprising:

a first set of elements connected between the fixed impedance node and the wide-band receiver . . . *the first set of elements providing a first time constant response to the first data signals*; and

a second set of elements connected between the fixed impedance node and the wide-band receiver . . . *the second set of elements providing a second time constant response to the second data signals.*” (Emphasis added).

As recited in claim 1, (i) the subject matter of the claimed invention (the interface system) is located between the fixed impedance node and the wide-band receiver to convert data signals from the fixed impedance node, and (ii) the interface system includes the first set of elements providing a first time constant response and the second set of elements providing a second time constant response.

In a rejection under 35 U.S.C. §102, each and every claim element must be present in the applied reference. Chun, however, fails to disclose “*the interface system between a fixed impedance node and the wide-band receiver*” that includes “*the first set of elements providing a first time constant response*” and “*the second set of elements providing a*

second time constant response.” Specifically, Chun discloses digital communication system for transmitting data between a data source element and a data receiver element. The data source element and the data receiver element of Chun include a source interface and a receiver interface, respectively. The source interface of Chun is not located between the fixed impedance node and the receiver. Rather, the source interface is located between the data transmitter (data source) and the fixed impedance node (line A or B). Because line driver A and line driver B as shown in FIGS. 8 and 9 of Chun are part of the source interface, these elements are not part of an *“interface system between a fixed impedance node and the wide-band receiver”* as recited in claim 1, as amended.

Neither does the receiver interface of Chun disclose all the features of claim 1. The receiver interface of Chun includes a differential input signal amplifier 122 at its receiving end. See FIG. 10 of Chun. The differential input signal amplifier 122 includes a series of resistors, diodes, and an operational amplifier. In Chun, both the signals from line A and line B (having different data rates) pass to the operational amplifier via the resistors and diodes; and thus, both signals are subject to the same time constant response. Nowhere in Chun does it disclose that any element in the differential input signal amplifier 122 or their combinations functions as *“the first set of elements providing a first time constant response to the first data signals”* or *“the second set of elements providing a second time constant response to the second data signals”* as recited in claim 1, as amended.

Chun does not disclose an *“interface system between a fixed impedance node and a wide-band receiver . . . comprising a first set of elements . . . providing a first time constant response to the first data signals; and a second set of elements . . . providing a second time*

constant response to the second data signals” as recited in claim 1, as amended. Therefore, claim 1, as amended, is patentably distinct from Chun.

Claims 2, 3, and 7 depend from claim 1. Therefore, claims 2, 3, and 7 are also patentably distinct from Chun. In addition, these claims variously recite “the first set of elements and the second set of elements have one or more elements in common”, or “the one or more elements in common decouple a DC voltage associated with the first and second data signals”, or “the first and second data signals are differential signals and the interface system has a differential circuit topology.” Chun, however, does not disclose these aspects of claims 2, 3, and 7. Therefore, claims 2, 3, and 7 are patentable for the additional reason that these aspects of the claimed invention are not disclosed in Chun.

Claim 6 is hereby canceled; and therefore, rejection of claim 6 is now moot.

Independent claim 18, as amended, also recites “*interface system between a fixed impedance node and a wide-band receiver . . . comprising: means for . . . providing a first time constant response to the first digital data signals; and means for . . . providing a second time constant response to the second digital data signals.*” (Emphasis added).

Therefore, essentially the same arguments set forth above with respect to claim 1 are equally applicable to claim 18, as amended. Claims 19-21 depend from claim 18; and therefore, claims 19-21 are also distinguishable from Chun.

In addition, claims 19-21 variously recite additional features of “the first and second digital data signals are differential signals and the interface system has a differential circuit topology”, or “means for isolating a DC voltage from the fixed impedance node to the wide-band receiver”, or “means for providing a reference DC bias voltage to the wide-band receiver.” Chun, however, does not disclose these aspects of claims 19-21. Therefore,

claims 19-21 are patentable for the additional reason that these features of claims are not disclosed in Chun.

Based on the above amendment and arguments, Applicants respectfully submit that for at least these reasons, claims 1-3, 7 and 8-21 are patentably distinct from Chun. Therefore, the Examiner is respectfully requested to withdraw this rejection.

In the eleventh paragraph of the Office Action, claim 18 was rejected under 35 USC §102(b) as allegedly being anticipated by U.S. Patent Application Publication No. 2002/0135845 to Robinson et al. ("Robinson"). This rejection is respectfully traversed with respect to this claim as amended herein.

Independent claim 18, as amended, recites:

"An interface system between a fixed impedance node and a wide-band receiver . . . comprising:

means for . . . providing a first time constant response to the first digital data signals; and

means for . . . providing a second time constant response to the second digital data signals." (Emphasis added).

In a rejection under 35 U.S.C. §102, each and every claim element must be present in the applied reference. Robinson, however, fails to disclose "*interface system between a fixed impedance node and a wide-band receiver*" that includes "*means for . . . providing a first time constant response to the first digital data signals*" and "*means for . . . providing a second time constant response to the second digital data signals.*" Specifically, the post-

amplifier circuit 16 of Robinson is not located between a *fixed impedance node* and a wide-band receiver. Nowhere in Robinson does it disclose a fixed impedance node, hence Robinson does not disclose an interface system between a fixed impedance node and a wide-band receiver.

Further, Robinson fails to disclose means for providing a first time constant response to the first digital data signals and means for providing a second time constant response to the second digital data signal. Robinson discloses a post-amplifier circuit 16 including a high gain amplifier 86, low pass filters 78, 80, and the input gain buffers 74, 76. But nowhere in Robinson does it state that any of these elements or their combinations provides different time constant responses for different data signals.

Robinson does not disclose an “interface system *between a fixed impedance node and a wide-band receiver . . . comprising: means for . . . providing a first time constant response to the first digital data signals; and means for . . . providing a second time constant response to the second digital data signals*” as recited in claim 18, as amended. Therefore, claim 18, as amended, is patentably distinct from Robinson.

Based on the above amendment and arguments, Applicants respectfully submit that for at least these reasons claim 18 is patentably distinct from Robinson. Therefore, the Examiner is respectfully requested to withdraw this rejection.

Rejection Under 35 USC §103(a)

In the fourteenth paragraph of the Office Action, claims 1-3, 6-7, and 19-21 were rejected under 35 USC §103(a) as allegedly being unpatentable in view of Robinson in view

of Chun. This rejection is respectfully traversed with respect to these claims as amended herein.

Independent claim 1, as amended, specifically recites “a first set of elements connected between the fixed impedance node and the wide-band receiver . . . *the first set of elements providing a first time constant response to the first data signals*; and a second set of elements connected between the fixed impedance node and the wide-band receiver . . . *the second set of elements providing a second time constant response to the second data signals*.” (Emphasis added).

The feature of “*the first set of elements providing a first time constant response to the first data signals . . . the second set of elements providing a second time constant response to the second data signals*” is advantageous because it allows the interface system to control its response to data signals of different rates and avoid distortion of data signals. See specification, paragraph [0021].

Neither Robinson nor Chun discloses this feature. As set forth above, nowhere in Robinson does it disclose that any of its elements or combinations of elements provide different time constant responses for different data signals. Neither does Chun. As set forth above, the receiver interface of Chun does not provide different time constant responses to different data signals. In Chun, both the signals from line A and line B (having different data rates) pass the resistors and diodes to the operational amplifier; and thus, both data signals are subject to the same time constant response. Nowhere in Chun does it disclose that different time constant responses are provided to different data signals.

To establish *prima facie* obviousness of a claimed invention, all claimed limitations must be taught or suggested by the prior art. See MPEP §2143.03. The deficient disclosures of Robinson and Chun preclude the Examiner from establishing even a *prima facie* basis from which a proper determination of obviousness of claim 1 can be made. Therefore, it is respectfully submitted that independent claim 1, as amended, is patentably distinct from Robinson in view of Chun.

Claims 2, 3, and 7 depend from claim 1, and thus all arguments set forth above for claim 1 with respect to Robinson and Chun are also applicable to claims 2, 3, and 7.

Further, these claims are patentable for variously reciting features in addition to the features of claim 1. Specifically, claim 2 is patentable for the additional reason that it recites the feature of “the first set of elements and the second set of elements have one or more elements in common.” This feature of claim 2 is advantageous because by sharing one or elements by the first set of elements and the second set of elements, the number of elements and the cost for producing the claimed invention can be reduced. Robinson and Chun fail to disclose this feature of claim 2.

Likewise, claim 3 is patentable for the additional reason that it recites the feature of “the one or more elements in common decouple a DC voltage associated with the first and second data signals.” This feature of claim 3 is advantageous because by decoupling the DC voltage associated with the first and second data signals, the electrical characteristics such as the DC offset voltage of the converted data signals may be adjusted. See specification, paragraph [0016]. Robinson and Chun fail to disclose this feature of claim 3.

Also, claim 7 is patentable for the additional reason that it recites the feature of “the first and second data signals are differential signals and the interface system has a differential circuit topology.” This feature of claim 7 is advantageous because the differential signals and the differential circuit topology are robust against common noise and crosstalk, allows faster data transfer, reduces electromagnetic interference (EMI), and reduce thermal drift. See specification, paragraph [0026]. Robinson and Chun fail to disclose this feature of claim 7.

Claim 6 is hereby canceled, and thus, rejection of claim 6 is now moot.

Similarly, independent claim 18, as amended, recites “*means for . . . providing a first time constant response to the first digital data signals; and means for . . . providing a second time constant response to the second digital data signals.*” (Emphasis added).

Claims 19-21 depend from claim 18. Therefore, essentially the same arguments set forth above for claim 1 are equally applicable to claims 19-21.

Further, these claims are patentable for variously reciting features in addition to the features of claim 18. Specifically, claim 19 further recites the feature of “the first and second digital data signals are differential signals and the interface system has a differential circuit topology.” This feature of claim 19 is advantageous because the differential signals and the differential circuit topology are robust against common noise and crosstalk, allows faster data transfer, reduces electromagnetic interference (EMI), and reduce thermal drift. See specification, paragraph [0026]. Robinson and Chun fail to disclose this feature of claim 19.

Likewise, claim 20 further recites the feature of “means for isolating a DC voltage from the fixed impedance node to the wide-band receiver.” This feature of claim 20 is advantageous because by decoupling the DC voltage associated with the first and second data

signals, the electrical characteristics such as the DC offset voltage of the converted data signals may be adjusted to match the input requirements of the wide-band receiver. See specification, paragraph [0016]. Robinson and Chun fail to disclose this feature of claim 20.

Also, claim 21 further recites the feature of “means for providing a reference DC bias voltage to the wide-band receiver.” This feature of claim 21 is advantageous because by providing a DC bias voltage decoupling the DC voltage associated with the first and second data signals, the data signals may be converted with reference to the DC bias voltage provided to the wide-band receiver. Robinson and Chun fail to disclose this feature of claim 21.

Based on the above amendment and arguments, Applicants respectfully submit that for at least these reasons claims 1-3, 7 and 19-21 are patentably distinct from Robinson and Chun. Therefore, the Examiner is respectfully requested to withdraw this rejection.

Conclusion

In sum, Applicants respectfully submit that claims 1-5, and 7-26, as presented herein, are patentable. Therefore, reconsideration and allowance of these claims are requested.

In addition, Applicants respectfully invite Examiner to contact Applicants' representative at the number provided below regarding any remaining issues that may expedite favorable disposition of this application.

Respectfully Submitted,
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